Amendments to the Claims:

1. (Cancelled)

2. (Previously Presented) The method as claimed in claim 5, further including:

dynamically updating in real-time the histogram and the cumulative curve.

3. (Previously Presented) The method as claimed in claim 5, further including:

filling the histogram with measurement data from a time window advancing in real time with selectable fixed length.

4. (Previously Presented) A method as claimed in claim 2, wherein, during the conversion, the computer generates aids for the retrospective analysis of histograms in the form of selectable functions that can be displayed on a viewing screen and outputs them together with the converted data combined as picture signals.

5. (Currently Amended) A method of automatically displaying medical measurement data in which a computer:

receives the medical measurement data,

automatically converts in real time the received measurement data into data for ~~histograms~~ a histogram including a continuously updated series of histogram values including a current histogram value and a plurality of preceding histogram values are generated,

during the conversion, generates a cumulative curve ~~indication~~ indicative of the medical measurement data the cumulative curve being cumulative of the series of histogram values, and

outputs the cumulative curve combined with the histograms as picture signals.

6. (Previously Presented) The method as claimed in claim 5, wherein the computer processes control signals that are produced by input means communicating with the computer that controls the conversion and/or the output of the picture signals.

7-11. (Cancelled)

12. (Currently Amended) A medical monitoring device, comprising:

a display ~~the displaying~~ device for automatically displaying medical measurement data; and

a computer programmed to perform the steps of: ~~as claimed in claim 7~~

receiving medical measurement data from a sensor device;

in real time, converting the medical measurement data into a histogram including a series of medical measurement values;

combining the series of medical measurement values of the histogram into a cumulative curve;

controlling the display device to display the histogram combined with the cumulative curve.

13. (Cancelled)

14. (Previously Presented) The medical monitoring device as claimed in claim 15, further comprising computer means for generating retrospective analysis aids including at least one of:

an inop bin for displaying times of invalid or out of action measurement data;

a deviation readout;

a direction-change indicator;

a histogram snapshot and trends aid; and

a combination of a plurality of histograms.

15. (Currently Amended) A medical monitoring device comprising:

computer means for receiving medical measurement data;

computer means for automatically converting the medical measurement data into histogram data[[;]] as the computer means is receiving the medical measurement data;

computer means for generating a cumulative curve as the medical measurement data is received; and

displaying means for visually displaying ~~the histogram data and~~ the cumulative curve concurrently with the histogram data as the medical measurement data is received.

16. (Previously Presented) The medical monitoring device as claimed in claim 15 further comprising an alarm indicator that is triggered when a measurement of histogram data is measured above or below a lower or upper alarm limit level.

17. (Currently Amended) The medical monitoring device as claimed in claim [[13]] 15, wherein the histogram data is binned into histogram bins, the histogram bin size being definable by the user.

18. (Currently Amended) The medical monitoring device as claimed in claim [[13]] 15, further comprising display means for displaying real-time signal patterns of the medical measurement data.

19. (Previously Presented) The medical monitoring device as claimed in claim 18, wherein the real-time signal patterns and the histogram data are displayed next to one another on the display means.

20. (Previously Presented) The method as claimed in claim 5 further including:

displaying the histogram with the cumulative curve superimposed, the histogram and the cumulative curve having common axes and a common scales.

21. (Previously Presented) The method as claimed in claim 4, wherein the retrospective analysis aids include at least one of:

a cumulative curve cursor for determining a percentage of time that histogram values are below a current cumulative cursor position;

range-selection cursors for determining a percentage of time that histogram values are within limits defined by the range-selection cursors;

a variability/stability readout that provides information about variability of the measurement data; and

a deviation and direction-change readout that shows deviation from a mean histogram value and a direction of measurement data change.

22. (Currently Amended) A computer readable medium storing a computer program for controlling a computer to perform the method of: ~~as claimed in claim 5~~

receiving medical measurement data;

converting in real time the received measurement data into data for a histogram including a continuously updated series of histogram values;

during the conversion, generating a cumulative curve indicative of the medical measurement data, the cumulative curve being cumulative of the series of histogram values; and,

outputs the cumulative curve combined with the histogram as picture signals.

23. (Cancelled)

24. (New) The medical minotirng device as claimed in claim 12, wherein the histogram and the cumulative curve are displayed superimposed with common axes and scales.

25. (New) The medical monitoring device as claimed in claim 15, wherein the histogram data includes a series of medical measurement values and the cumulative curve includes a sum of the medical measurement values.

26. (New) The medical monitoring device as claimed in claim 25, wherein the histogram and the cumulative curve are displayed superimposed with common axes and scales.